

9/3

Notice of Allowability

Application No.

10/059,905

Examiner

Roland G. Foster

Applicant(s)

ODINAK ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the examiner's amendment, approved on 11/29 & 30/2004.
2. ☒ The allowed claim(s) is/are 1-25 (were 1-4, 6-9, 11, 13-16, 18-20, 22, 24-27, and 29-32).
3. ☒ The drawings filed on 29 January 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

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DETAILED ACTION

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a voice message left by Mark D. Byrne (Reg. No. 50,125) on November 29, 2004 and during a telephone conversation on November 30, 2004.

The application has been amended as follows:

In claim 13 at line 6, the phrase "received user voice input" has been replaced by the phrase "digital signals".

Claims 34-67 have been cancelled.

Allowable Subject Matter

Claims 1-4, 6-9, 11, 13-16, 18-20, 22, 24-27, and 29-32 are allowed.

Examiner's Reasons for Allowance

The independent claims are directed to a system and method for performing speech recognition. The system receives an acoustic analog signal directly from a user or via a microphone at a user system. The acoustic analog signal is converted to a digital signal. Noise is cancelled from the digital signal to form a processed digital signal. The digital signals are processed at the user system based on two or more of noise cancellation, echo-cancellation or end-point to form a processed voice signal, wherein the processed voice signal is in a format capable of being output over a speaker. The processed voice signal is sent over a network and speech recognition is performed

With respect to independent claims 1, 11, and 13, certain express limitations materially limit the scope of the claims. For example, the detected user speech in the processed digital signal (or the processed voice signal formed from a digital signal as in claim 13) must be "in a format capable of being outputted over a speaker" as claimed.¹ Thus, situations where the digital signal was in a format incapable of being output over a speaker would not read on the invention as expressly claimed, such as when the speaker is analog only. The possibility of converting the digital signal into analog format before being fed into the analog speaker is irrelevant because doing so would strongly indicate that the digital signal was originally in a

¹ No written or enablement issues exist regarding the requirement that the digital signal be "in a format capable of being outputted over a speaker" because the applicant's specification clearly discloses processing of a digital audio signal (e.g., page 5, lines 26-35). Further, the claims place the burden on the digital signal for being "capable" of being output over a speaker. Thus, there is no need to disclose significant details regarding speaker 28 (Fig. 1). Nonetheless, speakers capable of accepting a digital signal are commonplace. For example, digital speakers are often used in computer systems (e.g., the small, case speakers often provided with personal computers) and in networking environments, where the speaker is directly connected to a digital network (e.g., see U.S. Patent No. 5,946,343 to Schotz et al.).

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format incapable of being output over the analog speaker contrary to the express claim limitations.

Other express claim limitations materially limit the scope of the claim. For example, the claims recites that the acoustic analog signal (e.g., the user's speech, which forms acoustic, analog waves) is received either directly from the user or via a microphone at the user system and, after digital processing, then sent to a server over a network. Thus, situations where an analog signal is received indirectly from the user at the user system, such as via a telephone line connection, would not read of the express claim limitations. Further, the claims require that the analog signal is converted into a digital signal and processed using by using two or more of noise cancellation, echo-cancellation or end pointing to form detected user speech or a processed signal.

Independent claim 24 is similar to the preceding independent claims in that claim 24 recites express limitations such requiring the processed voice signal to be in a format capable of being outputted over a speaker and requiring the digital signal to be processed using two or more of noise cancellation, echo cancellation or end pointing. Further, claim 24 is directed to a means plus function claim. Claim 24 is interpreted as invoking 35 U.S.C. 112, sixth paragraph because several limitations in claim 24 meet the 3-prong analysis. MPEP § 2181 [R-2]. For example, several limitations recite the phrase "means for", in several instance the phrase "means for" is modified by functional language (e.g., "for converting the analog signals to digital signals"), and in several instances the "means for" phrases are not modified by sufficient structure, material, or

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acts for achieving a specified function (see the example provided above). Thus, the examiner applies 112, sixth paragraph to interpret claim 24 and gives this claim its broadest reasonable interpretation consistent with the written description of the invention in the application, where the examiner "may not disregard the structure disclosed in the specification corresponding to such language when rendering a patentability determination." MPEP § 2181 [R-2] (quoting from In re Donaldson Co., 16 F.3d 1189, 29 USPQ2d 1845 (Fed. Cir. 1994).

The closest prior art of record is U.S. Patent No. 6,453,020 B1 to Hughes et al. ("Hughes"), as applied in prior Office actions. Hughes fails to disclose a digital signal in a format capable of being output over a speaker, such as by the use of a digital speaker. Hughes also fails to disclose receiving the acoustic analog signal directly at the user system, and after processing, sending the signal to a server over a network. Hughes also fails to disclose that the detected user speech in the processed digital signal (or the processed voice signal formed from a digital signal). With respect to claim 24, Hughes also fails to disclose the corresponding structure in the specification as claimed by the means plus function language.

The remaining prior art of record fails to teach or fairly suggest the obviousness of modifying Hughes in order to arrive at the invention as claimed in detail by the applicant.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roland Foster whose telephone number is (703) 305-1491. The examiner can normally be reached on Monday through Friday from 9:00 a.m. to 5:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan S. Tsang, can be reached on (703) 305-4895. The fax phone number for this group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer service whose telephone number is (703) 306-0377.



Roland G. Foster
Primary Patent Examiner
December 1, 2004